


Panlite® L-1225Z 100

Units English 

Teijin Kasei America, Inc. (Teijin Chemicals) - Polycarbonate

Action

Legend ([Open](#))

General Information

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Features	• Good UV Resistance • Low Viscosity
Uses	• Automotive Applications • Lenses • General Purpose • Transparent or Translucent Parts
Appearance	• Clear/Transparent
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20		ASTM D792
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.671	in ³ /10min	ISO 1133
Molding Shrinkage - Flow	0.0050 to 0.0070	in/in	ASTM D955
Molding Shrinkage - Across Flow	0.0050 to 0.0070	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow	0.50 to 0.70	%	
Flow	0.50 to 0.70	%	
Water Absorption (73°F, 24 hr)	0.20	%	ASTM D570
Water Absorption (73°F, 24 hr)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	309000	psi	ASTM D638
Tensile Modulus	348000	psi	ISO 527-2/1
Tensile Strength (Yield)	9140	psi	ASTM D638
Tensile Stress (Yield)	8850	psi	ISO 527-2/50
Tensile Strength (Break)	11200	psi	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Elongation (Break)	140	%	ASTM D638
Nominal Tensile Strain at Break	50	%	ISO 527-2/50
Flexural Modulus	328000	psi	ASTM D790
Flexural Modulus ²	348000	psi	ISO 178
Flexural Strength ²	13600	psi	ISO 178
Flexural Strength (Yield)	13500	psi	ASTM D790
Compressive Strength	11000	psi	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	34	ft-lb/in ²	ISO 179
Charpy Unnotched Impact Strength	No Break		ISO 179
Notched Izod Impact			ASTM D256
0.126 in	16	ft-lb/in	
0.252 in	2.4	ft-lb/in	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	77		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	286	°F	ASTM D648

Heat Deflection Temperature (66 psi, Unannealed)	286 °F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	268 °F	ASTMD648
Heat Deflection Temperature (264 psi, Unannealed)	262 °F	ISO 75-2/A
Vicat Softening Temperature	298 °F	ISO 306/B50
CLTE - Flow	0.000039 in/in/°F	ASTMD696
CLTE - Flow	0.000039 in/in/°F	ISO 11359-2
CLTE - Transverse	0.000039 in/in/°F	ASTMD696
CLTE - Transverse	0.000039 in/in/°F	ISO 11359-2
RTI Elec (0.0579 in)	257 °F	UL 746
RTI Imp (0.0579 in)	239 °F	UL 746
RTI Str (0.0579 in)	257 °F	UL 746
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+15 ohm	IEC 60093
Volume Resistivity	3.0E+18 ohm·cm	ASTMD257
Volume Resistivity	1.0E+15 ohm·cm	IEC 60093
Dielectric Strength ³ (0.0630 in)	760 V/mil	ASTMD149
Electric Strength	760 V/mil	IEC 60243-1
Dielectric Constant		ASTMD150
60 Hz	2.95	
1 MHz	2.90	
Relative Permittivity		IEC 60250
100 Hz	3.10	
1 MHz	3.00	
Dissipation Factor		ASTMD150
60 Hz	0.00040	
1 MHz	0.0090	
Dissipation Factor		IEC 60250
100 Hz	0.0010	
1 MHz	0.0090	
Arc Resistance	110 sec	ASTMD495
Comparative Tracking Index (CTI)	300 V	UL 746
Comparative Tracking Index	250 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.0748 in	HB	
0.0157 in	V-2	
Optical	Nominal Value Unit	Test Method
Refractive Index	1.585	ASTMD542
Transmittance (118 mil)	88.0 %	ASTMD1003
Additional Information		
Electric Strength, IEC 60243-1, Short Time Test: 30 MV/m		
Notes		
¹ Typical properties: these are not to be construed as specifications.		
² 0.079 in/min		
³ Method C (Slow Rate-of-Rise)		

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